

20. FURTHER EXTENSION OF RANGE OF THE FROG,
UPERODON GLOBULOSUM (GÜNTHER) IN JALPAIGURI,
WEST BENGAL

During the cultivation of a piece of land in the Agricultural Farm of Jalpaiguri, northern Bengal, two frogs were exhumed from the field. Sri Saumendra Kumar Das, Research Assistant in Entomology, Government of West Bengal, at once recognized the frogs as rare and interesting forms, and kindly presented them to our laboratory in a well-preserved condition. We are greatly indebted to him for this gift.

The globular shape of the body, the tiny head with dark bead-like eyes, and the much shortened hind limbs with shovel-shaped metatarsal tubercles are so characteristic that we had no difficulty in identifying the frogs as *Uperodon globulosum* (Günther) (*vide* Parker, 1934).

According to the previous records from Bengal (Mukerji, 1933; Bhaduri, 1945) it is evident that *U. globulosum* is of rare occurrence. In 1945 Bhaduri mentioned that the total number recorded then was only ten, of which four had been collected from Bengal. He further stated: '*U. globulosum* also enjoys a somewhat wide distribution, it being found in Madras Presidency, Central Provinces and Bengal, although numerical records from these areas are few and far between. All the same, it may be presumed that it is not so common as its ally *systema* in any of these areas.' However, the present record includes two more specimens from Bengal. The presence of *U. globulosum* in Jalpaiguri in northern Bengal, particularly as it is situated on the border-line of Assam, seems to be an interesting feature. Its occurrence, therefore, in some parts of Assam may not be unlikely from the point of view of distribution.

Very recently Abdulali and Daniel (1954) have discovered nearly a dozen specimens of this species breeding in the Kanheri Caves near Borivli, Salsette Island, Bombay, and they also noted some interesting features of their habits. Evidently they come out of their burrowing habitats for the purpose of breeding on the advent of the first showers of rain in the month of June. However, its particular habitat in the area is yet to be discovered. Nevertheless, the occurrence of *U. globulosum* in fair numbers in Salsette Island, Bombay, considerably extends the range of distribution of this species.

On dissection of the two specimens, the larger one proved to be a female bloated with well-developed ovaries containing pigmented ova; the smaller a male possessing small testes which appeared to be immature. The dusky skin under the throat, as noted by Bhaduri (1945) in the lone specimen, is not evident in the specimen before us. Abdulali and Daniel (1954), who relied on the dark chins only for determining the male sex, did not pay any particular attention to other secondary sexual characters which might have been present in the males, since the frogs were breeding at the time. They, however, noted the breeding females to possess 'numerous pustules' around the vent, which in their opinion may be considered as a secondary sexual character.

MEASUREMENTS (IN MILLIMETRES) OF SOME OF THE BODY
PARTS OF THE TWO SPECIMENS:

			♂	♀
Tip of the snout to vent	...	...	29.0	58.0
Breadth of head	...	...	9.5	17.2
Eye (orbital diameter)	...	...	2.0	4.1
Snout	...	...	1.5	3.0
Orbital end to the tip of the snout	...	...	4.0	7.1
Upper eyelid	...	...	1.5	3.5
Inter-orbital width	...	...	5.0	8.2
Outer metatarsal tubercles	2.0	3.5
Inner metatarsal tubercles	3.5	6.5
Tibia	11.0	20.5

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 Mukerji, D. D. (1933): Some observations on the burrowing toad, *Cacopus globulosum* Günther. *J. Proc. Asiat. Soc. Bengal*, N. S., 27: 97-100, 1931.
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[Abdulali & Daniel (1954) actually sexed 5 specimens in the breeding season and found the dark chin in all the three males among them. It could be that this characteristic is present only in mature males, and possibly only in the breeding season.—Eds.]

21. THE TADPOLES OF *UPERODON GLOBULOSUM* (GÜNTH.)

(With three text figures)

The range of distribution of *Uperodon globulosum* has recently been extended to Bombay and reference was made to the tadpoles collected at about the same place and time. (Abdulali & Daniel, *JBNHS*, 52: 637-639). The present notes concern the tadpoles which have not been previously described.

On 13 June 1954, after the first few monsoon showers, a few adults of this species were found floating sluggishly in a rock cistern—one of several—in the Kanheri Caves (ca. 1,300 ft.) near Bombay. The cistern held only about 9" of water which then stood several feet from the top. The water was not examined for either eggs or tadpoles, but the large females of *U. globulosum* collected then were found to have spent ovaries. The breeding season in this area, it would therefore appear, coincides with the break of the monsoon in late May or early June. On 19 June, when the cisterns were overflowing, a large number of actively swimming tadpoles were observed in the above, as also in an adjoining cistern. No adults were then noticed in them.